REMARKS

The Office Action stated at pages 3-4 that claim 6 is not clear. A typographic error had been made in that the words "deproteination and" had been inadvertently omitted. Claim 6 has been amended to correct this error.

Claim 6 has also been amended to add some limitations.

The Office Action at page 5 asserts US patent 6,444,448 to **Wheatcroft.**

The Examiner puts forth the view that **Wheatcroft** teaches the production of Beta-glucan with immunostimulary activity, anti-infective property.

The Examiner further puts forth the view that **Wheatcroft** teaches that the preparation with water using homogenizer (wet grinding) which can result in a form of viscous product; that the glucan can also be prepared in the form of gel or cream; and that **Wheatcroft** also teaches the use of water (10% and 20% of dry weight) with varying temperature.

It is important, however, to appreciate that **Wheatcroft** carries out homogenizing and the claimed invention describes wet grinding. These are different intermediate products prepared by different processes.

The **treated intermediate product** in case of **Wheatcroft** is **beta-glucan-mannan produced by autolyse of yeast**, separation of solid material from the autolyzed product and by subsequent homogenizing is achieved reducing the solid material to particles of less than about 2 microns.

The **treated intermediate product** in case of the claimed invention is **fungal beta-glucan produced from *Pleurotus ostreatus* by a process described in PCT publication WO 2002/085950,** which has

already been made of record herein and which has already been considered by the Examiner.

In conclusion the intermediate products are different in the two cases (the reference and the claimed invention) with different physical and chemical properties.

It may be helpful to discuss the process in the cited reference as well as the process in the claim.

Wheatcroft's process of homogenizing is described very briefly in example 5, and the only specific parameter described is the use of water at 10% and 20% of dry weight.

In contrast, in the claimed process, hydrated insoluble glucan is achieving a swelling volume in the water of 50 to 500 ml/g, which means that the consistency is several times lower than in the case of **Wheatcroft's** process. See also examples 1 - 4 in the patent application.

Further conditions described in the claim, and not in Wheatcroft, include the rotational speed of 3000 to 9000 rpm for 10 to 20 minutes, and the subsequent treatment such as the adjusting by heat sterilization at a temperature of 90 to 110 degrees C for 20 to 30 minutes, resulting in a gel which is formed by fungal polysaccharide with the beta-(1,3)-D-bond in the principal chain, with a concentration of 0.5 to 3% by weight.

It is apparent that the compared processes are different.

The Examiner puts forth the view that **Wheatcroft** supposedly also teaches "the use ..... with varying temperature (column 11-line 46-49)." But this portion of Wheatcroft describes the temperature of a process of yeast autolysing, and that discussion of temperature has nothing to do with the Wheatcroft process which the Examiner tries to compare with the claimed invention.

The Examiner puts forth the view that **Wheatcroft** supposedly teaches that the Beta-glucans are formed from D-glucose with beta-1,3- and beta-1,6- bonds and can supposedly vary in chain-length and molecular weight by its nature. The Examiner admits that Wheatcroft does not specifically teach that the beta-1,3-D- bond branched at every fourth anhydroglucose unit. The Examiner then puts forth the view that it is supposedly obvious in the art to modify the branching structure to optimize biological activity. Applicant's attorney disagrees with this view, and motivated by the case of *In Re Ahlert and Kruger*, 165 USPQ 418 (CCPA 1970) applicant's attorney hereby challenges this view and asks whether the Examiner can show support for this view.

According to **Wheatcroft** (claim 25) the product in Wheatcroft comprises 1,3-linked and 1,6- linked glucose monomers, and the ratio of 1,3-linked and 1,6-linked glucose monomers is 4.9:1 to 7.3:1. In contrast, the product in the claimed invention does not comprise 1,6-linked glucose monomers, but instead is formed only by fungal polysaccharide with the beta-(1,3)-D-bond branched et every fourth anhydroglucose unit. It is suggested that this structure is impossible to achieve by **Wheatcroft's process.** If it is the Examiner's view that such a structure can be achieved by Wheatcroft's process, then motivated by the case of *In Re Ahlert and Kruger*, 165 USPQ 418 (CCPA 1970) applicant's attorney asks whether the Examiner can show support for this view.

By reason of the foregoing, reconsideration is requested.

/s/

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